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The time period for reply, if any, is set in the attached communication.

RECORD OF ORAL HEARING

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte DAVID W. BURNS

Appeal 2008-3638  
Application 10/710,854  
Technology Center 2600

Oral Hearing Held: November 18, 2008

Before JOSEPH F. RUGGIERO, ROBERT E. NAPPI, and CARLA M. KRIVAK, Administrative Patent Judges

ON BEHALF OF THE APPELLANT:

DAVID W. BURNS  
DEBRA BURNS  
15770 RICA VISTA WAY  
SAN JOSE CA 95127

The above-entitled matter came on for hearing on Tuesday, November 18, 2008, commencing at 9:02 a.m., at The U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia, before Laura P. Platt.

1 THE CLERK: Good morning. Calendar Number 34, Appeal Number  
2 2008-3638, Mr. Burns.

3 JUDGE RUGGIERO: Good morning.

4 MR. BURNS: Good morning.

5 JUDGE RUGGIERO: Have you been before the board before?

6 MR. BURNS: We have never been before this board.

7 JUDGE RUGGIERO: One thing, you've got about 20 minutes  
8 approximately from whatever time it is now.

9 MR. BURNS: Debra Burns is with me here. By way of introduction,  
10 my name is David Burns. I'm an inventor, applicant, agent, and to a large  
11 extent also the developer of this particular invention.

12 I did want to make the formal request for additional time, Your  
13 Honors, possibly up to 30 minutes for discussion and questions.

14 JUDGE RUGGIERO: All right.

15 MR. BURNS: As far as the background of this invention, we have  
16 filed this particular application. We have also filed ten more applications,  
17 all on different aspects of the same project. The ten were filed provisionally  
18 within a week of the first one. The ten were subsequently filed as full  
19 utilities and are now going through prosecution.

20 This application is our lead application. It's very important to us  
21 because this is the essentials of all the other applications. The lead  
22 application has also been filed as a PCT and is now being prosecuted as an  
23 EP and an Indian patent. For background, that's as far as we'd like to go.

24 The current application covers what we call a telemetric imager. It  
25 also covers the general method and general system.

26 If I might take a moment just to describe what we feel the invention is

1 for Your Honors?

2 JUDGE RUGGIERO: Go ahead.

3 MR. BURNS: What we are claiming in our invention is essentially a  
4 machine-visioned, stylus-based computer model that can pick up  
5 handwriting or can pick up motions of a stylus tip so that one may  
6 essentially replace or augment the electronic computer model that we are all  
7 so fond of and use the dexterity of the fingers to be able to get in resolution  
8 that could allow for handwriting.

9 As we've all seen, there's way too many slash S's around for electronic  
10 signatures, and no one yet has come up with a way that can recognize  
11 handwriting and transcribe it accurately.

12 Our approach allows us to use what we call a passive stylus. No one  
13 uses a number 2 pencil, at least I don't think often, but ours can recognize an  
14 old-fashioned number 2 pencil because it's machine visioned.

15 There are other alternative approaches out there. We go to consumer  
16 electronics stores often just to look and see what's out there. We don't see  
17 anything out there right now that's our invention.

18 What we do see is pads of paper with coded, printed material in it to  
19 indicate where a stylus might be. We see graphics tablets, which are  
20 basically an extension of the screen, not the stylus. We find other  
21 approaches.

22 Even HP is rumored to be coming out this summer with a stylus-based  
23 mouse that basically either has a small, very small roller ball in it or possibly  
24 a camera in the stylus to indicate where it's going.

25 As far as the prosecution status goes, there's five searches that have  
26 been done on this invention -- one of them has been done by Debra, and if I

1 may introduce her also as my wife.

2 But she also did the searches. She did the background. She wrote the  
3 background. She did the formal figures and she did all the electronic filing.  
4 So we are kind of a husband-and-wife team here regarding this.

5 In fact, those ten applications in the portfolio all have sequential  
6 numbers, except for one, because of Debra doing electronic filing way early  
7 in the process. Let me set that aside.

8 The other four searches have been done by the examiner, the initial  
9 one, second one. She did the examination for a PCT, and then we also filed  
10 a RCE. So we've made progress moving ahead but have now stalled.

11 We did, after our first rejection, see the examiner in person. We came  
12 out for an inventor interview and talked things over with her and showed her  
13 some things.

14 At that point, we were able to get past one piece of cited art, but  
15 things have stalled. We went ahead with the RCE, and that's upon her  
16 request.

17 We also did what's called the preappeals brief procedure. We're not  
18 sure if that's now the formal program, but we were very happy to take  
19 advantage of that, of course, as you would know, three judges or three local  
20 people examining, including the SPE examiner and one unknown person.

21 We came back with limited success from that. Just an objection to  
22 some claims, but everything was essentially rejected. So we feel things have  
23 stalled, and we have now appealed before the three of you, Your Honors,  
24 with this oral hearing.

25 We feel that there's a number of issues, and I do apologize for the  
26 wordiness in the appeal brief.

1           There is a reply brief. And I understand that both documents are in  
2   your possession, the original appeal brief, as well as the reply, that you don't  
3   have to be married. Thank you. That covers a lot of things.

4           There's, like, 11 issues there, counts. We'd like to focus in our time  
5   on one, possibly two of them.

6           Our independent claim number 1 really consummates our invention.  
7   The first claim that the examiner came back with is an apparatus claim,  
8   including "means for" language, but we'd like to focus on claim 1 if that  
9   would be okay with you.

10          The issues that have come up are somewhat numerous, but they  
11   largely come back to one piece of art by Omura, a RICOH inventor, who has  
12   a graphics tablet oriented stylus to be able to look at this. This is the Omura  
13   patent 6,594,023, if I may refer to it as the Omura patent.

14          JUDGE RUGGIERO: I have one question. The difference between  
15   claim 1 and claim 31 is that claim 1 recites an illuminating source?

16          MR. BURNS: That is correct. And claim 31, the first four, also has  
17   the illuminating source for the light as well.

18          JUDGE RUGGIERO: Okay.

19          MR. BURNS: Is that correct?

20          JUDGE RUGGIERO: Right, but it's claim 1 that tells you where the  
21   light source is?

22          MR. BURNS: No. Claim 1 is not clear on where the light source is.  
23   We thought it was clear in saying that the claim actually says illuminating  
24   the stylus tip, but when someone says illuminating the stylus tip, to us that  
25   didn't mean illuminating it from inside outward. It means illuminating the  
26   stylus tip.

1 JUDGE RUGGIERO: All right. What's the difference then between  
2 claim 1 and claim 31?

3 MR. BURNS: In general, claim 31 is the method -- I'm sorry. Do  
4 you mean the fourth claim that covers everything, different language?

5 JUDGE RUGGIERO: Well, the examiner rejected claim 31, I think,  
6 on a 102 rejection over Omura, but when he got to claim 1, then he added  
7 Ogawa.

8 MR. BURNS: Yes.

9 JUDGE RUGGIERO: I'm trying to figure out why, what was the  
10 reason for that.

11 MR. BURNS: We think that both Omura and Ogawa are  
12 inappropriate art for this. So we can take them whichever way. The Omura  
13 one is probably the closest to what we feel is our invention. The Omura one,  
14 especially this figure 8, Omura has several, three, four different ways to  
15 view this. It's all focused right in a plane.

16 JUDGE RUGGIERO: I think it was figure 8 of --

17 MR. BURNS: Figure 8 specifically, yes. It's got these two little  
18 cameras and a little stylus out here. That's one that was found in that last  
19 search.

20 This particular figure has two cameras on it, but in the specification  
21 those are infrared cameras. On the stylus is an infrared LED.

22 The intention of Omura, in our minds clearly, is not to image the  
23 stylus tip, but rather to use the infrared cameras themselves to sense and pick  
24 up a light beam emitted from an infrared LED.

25 If we look at objects for infrared detection, we basically, except for  
26 differences in how the light comes off it, we don't basically see images if

1 we're looking at infrared.

2 The infrared LED is inherent in Omura figure 8. It's what we call an  
3 active stylus. In other words, it requires a battery, wires, things like that.  
4 Ours is machine visioned looking at it.

5 Now, Omura uses the infrared camera to detect a spot of light. Okay?  
6 In Omura's description of it, they looked for a peak intensity and the light  
7 coming off the stylus tip. That's not how ours works.

8 We have amended our claim language to declare that the stylus tip is  
9 written in the spec. It's not just the end, but it's the end in a region close to it  
10 to try to capture what you will and better clarify that our invention is not  
11 picking off a spot of light.

12 JUDGE RUGGIERO: Where is that in the claim?

13 JUDGE NAPPI: Where is that in the claim? You focused in on claim  
14 1. I'm just wondering where that is in claim 1.

15 JUDGE RUGGIERO: You've spent a lot of time in the prosecution, I  
16 know, talking about imaging, but the claim says broadly imaging.

17 MR. BURNS: Yes. I realize the source of my confusion. I apologize  
18 for confusing the three of you.

19 I recognize in going through the appeals that perhaps better language  
20 is appropriate. We recognize that in -- that it is possible for the judges, for  
21 you, to give a complete reversal, and that's what we are asking for, but it is  
22 also for you to give explicit language suggestion to the examiner. We have  
23 prepared --

24 JUDGE NAPPI: That's for you and the examiner. If you want to  
25 negotiate different plain language, that's for the examination process, not the  
26 appeal process.



1 MR. BURNS: We understand that it's an option for the appeal board  
2 to do to give explicit language. If that was one of the cases, clearing up that  
3 could help both of us to our satisfaction and also to the examiners. I do have  
4 a copy, if there is interest in what that language might be, here.

5 JUDGE RUGGIERO: It is really between -- it's part of the  
6 examination process between you and the examiner. We are just here to --  
7 as an appeal board. We are reviewing the existing rejection and the existing  
8 claim. We are not here to suggest any language.

9 MR. BURNS: Well, in defense of the position, we had declared in the  
10 specification quite clearly with regard to figure 1 that the stylus tip includes  
11 the end of the stylus in a region proximate. In the language for the claim we  
12 just use stylus tip, but the definition is actually in the specification. I guess  
13 we'd have to lean back on that for clarification.

14 Our intent on machine vision is just a spot of light doesn't declare  
15 something in terms of machine vision. You need two or more places where  
16 you are identifying something, and that might be one area that things could  
17 be clarified better on our part.

18 JUDGE NAPPI: Where did you define the specifications?

19 MR. BURNS: Figure 1, paragraph --

20 JUDGE NAPPI: Let's back up for a second. Where is it defined in  
21 the originally filed specifications?

22 MR. BURNS: Paragraph 48, Your Honor. Paragraph 48, about three  
23 sentences down where it says stylus tip 18. If I may read it?

24 JUDGE NAPPI: Yes.

25 MR. BURNS: Where it says stylus tip 18 refers herein to one end or  
26 the other of stylus 20, along with the region proximate to the cited end.

1           When this application has put it together, we wanted to make sure that  
2   was put in. That's what we meant by a stylus tip. Are you able to locate it?

3           JUDGE NAPPI: Yes. I lost the paragraph again.

4           MR. BURNS: Paragraph 48, about four sentences in. In the printed  
5   PDF copy, it would be third line on the second column.

6           JUDGE NAPPI: 48? 48 says writing in 28 of stylus 20 which can  
7   deposit material such as pencil, graphite, pen, ink.

8           MR. BURNS: You know, I have the published application in front of  
9   me, and I'm going by the paragraph numbers in the published application. If  
10   you were to browse up to where bold figure 1 is described, I'm sure we can  
11   resolve what paragraph is really intended here.

12          JUDGE NAPPI: Okay.

13          MR. BURNS: Right after the heading of Detailed Description of  
14   Invention, it says Figure 1 Illustration System. Are you able to locate that?

15          JUDGE NAPPI: Yes.

16          MR. BURNS: If you go down about three sentences, it says that the  
17   stylus tip 18 refers herein to one end or the other of stylus 20, along with the  
18   region proximate to that cited end.

19          Are you able to find that?

20          JUDGE KRIVAK: Yes.

21          JUDGE NAPPI: Yes.

22          MR. BURNS: Okay. Yes, it would be fine with us if that language  
23   was in the claim. It's currently not in the claim. It could be in the claim.

24          It wouldn't hurt us because that would clarify it, and perhaps you can  
25   separate out some of the dilemma regarding testing a spot of light emitted  
26   from an active stylus versus the machine-visioned approach where you

1 really want to nail in on more than a spot of light onto identifiable features.

2 JUDGE RUGGIERO: Just focusing on the language that presently  
3 exists, are you contending that Omura doesn't have any imaging?

4 MR. BURNS: We would contend that Omura has the ability with the  
5 IRC cameras to detect IR light. We do not -- we contend that Omura does  
6 not use those cameras to generate images where the images are used to  
7 determine the point of the stylus.

8 Although it's very attractive to look at figure 8 and say hey, of course  
9 he could have done it; he does do it. You know, that would be, if I may  
10 bring up an analogy, like someone drawing a picture of a cell phone, a base  
11 station, and declaring that all protocols for cell phones are covered by that  
12 one particular figure.

13 You've got to look under the hood a little bit here. When you look  
14 under the hood, you recognize that our method is different.

15 You might even look at the application by Omura, the issued patent  
16 by Omura. Omura states that in the situation of looking for an IR light,  
17 they're looking for a peak signal. They use the infrared cameras to look for  
18 these peak signals.

19 The explanation is made -- and you may be familiar with old camera  
20 technology -- if you overexpose everything, it turns white, and if you  
21 underexpose everything, it's black.

22 Omura makes the statement that says that if you underexpose it,  
23 everything turns black and makes the statement that the stylus is not imaged.  
24 It was a surprise to find that in there, and I have to admit it hasn't been  
25 clearly spelled out in the defense.

26 JUDGE RUGGIERO: Isn't he getting an image of the tip, of the

1 stylus tip?

2 MR. BURNS: He's not using images of the stylus tip to determine  
3 where the stylus is.

4 JUDGE RUGGIERO: If you look at figure 9, figure 9 of Omura, it  
5 seems he is detecting the peak signal from the stylus tip, which is an image  
6 signal according to figure 9.

7 MR. BURNS: Yes, exactly. He is entitled to the patent claims to it,  
8 but that is the point. That is a signal that comes back because of the infrared  
9 light that's being emitted. It's not machine vision. It's not looking at the  
10 stylus tip where you look at the end and region close to the end for it.

11 If we were to put a light on ours, an infrared light, and do it this way,  
12 we would be infringing. We don't think our current language actually reads  
13 on this, but, you know, the interpretation is up to others. We are willing to  
14 clarify more, if that would help, but we feel that we have a different  
15 invention.

16 JUDGE RUGGIERO: Okay. Proceed.

17 MR. BURNS: Okay. There are other pieces of art, and you  
18 mentioned Ogawa as well. Ogawa, like Omura, puts together this  
19 assortment of different approaches to do it.

20 If you read through either or both of those, they're highly focused at  
21 looking at light being interrupted in a plane. I mean one of Ogawa's  
22 applications would have a light on one side, have a frame with a bunch of  
23 retroreflecting mirrors so that if you interrupt -- as light comes out, it bounces  
24 back, and as you interrupt it, you use a linear imager to look at it.

25 Another version has an array of photo diodes at one end and an array of  
26 photo transistors at the other end in the X and Y direction. The intent is not

1 there to do 3D imaging or machine vision to do it.

2 Even in the case where they have cameras in there, they use  
3 collimating objects to make sure that you're only looking at a thin spot. As  
4 you may know from optics training, if you collimate light down, you lose the  
5 ability to image it. It's all concentrated into a line.

6 So we feel that neither Ogawa nor Omura, either individually or  
7 combined, doesn't get our invention.

8 JUDGE RUGGIERO: Okay. What about, I think, claim 40? Claim  
9 40 was -- I think the examiner used two additional references against 40,  
10 Segen and I think Griffin.

11 MR. BURNS: Oh, yes. You know, 40 --

12 JUDGE RUGGIERO: Your argument would be the same, that --

13 MR. BURNS: Yes. 40 is interesting because it added what I  
14 mentioned earlier about the RCE was added to kind of probe the examiner to  
15 find out if there's any region that we can operate in that the examiner would  
16 be tolerant to, and so we put in single telemetric imagers.

17 Segen and that whole group has not a single telemetric imager  
18 because they just have, in the case of one of them, only a single photo cell  
19 that goes around with a rotating wheel.

20 I mean this is much like a scanner mirror in a grocery store looking  
21 for a bar code as it goes, and it requires all this infrastructure so they would  
22 have these mirrors and look for things. It's not imaging. It's rotating  
23 something as it goes around. So we didn't think that particular approach was  
24 appropriate.

25 Our single telemetric imager is meant to get us by Omura and Ogawa  
26 that puts things in the upper left corner and the upper right corner, which is

1 not a very eloquent solution.

2 Our ideal device would have one imaging array with little optics, you  
3 know, with two lens arrays, if you will, binocular optics, as we call them,  
4 onto one imaging array that can fit into a cell phone, that can fit into a small  
5 desk-mounted approach, that can fit into a PC to augment the touch screens,  
6 to be put into the cell phones and the like.

7 It's small and compact where the size of the paper isn't determined by  
8 the left and right aspects of it.

9 JUDGE RUGGIERO: I want to verify what your position is on the  
10 examiner's rejection of claim 1. The examiner made a 103.

11 MR. BURNS: That's correct.

12 JUDGE RUGGIERO: I think he was looking to Ogawa apparently  
13 because Ogawa has alternative embodiments.

14 With one embodiment he puts a light in the tip of a stylus, and another  
15 embodiment he has an externally located light source. It is the examiner's  
16 position that it would be obvious to do either one, I guess. What is your  
17 position on the combination that the examiner made?

18 MR. BURNS: We think the combination is still incorrect. Early in  
19 the rejections, we had a 102 rejection against Ogawa. When we went to the  
20 single telemetric imager, that got us past.

21 But Ogawa does have the light on one side which is external, but even  
22 Ogawa doesn't image the stylus tip which includes the end in the region  
23 proximate to the end to be able to determine where the X, Y and Z position  
24 is. Ogawa concentrates it down.

25 It's not the same approach. It's a different approach. Our approach  
26 uses fewer parts. It's not as complex. What's complex is doing image

1 processing to be able to identify this, and that's one reason why I think  
2 Ogawa and Omura never mentioned or alluded to those types of approaches.

3 JUDGE RUGGIERO: I guess just one other thing, for me anyway. I  
4 think somewhere in the prosecution, I think -- I forget where it is now. I  
5 think you sort of disregarded the use of the word single in one of the claim  
6 languages here, as if the word single wasn't important. Single telemetric  
7 imager. Is it your feeling that the word single is not important?

8 MR. BURNS: Your Honor, when it says a single telemetric imager or  
9 a telemetric imager, we still feel it's one. We don't say a plurality of  
10 telemetric imagers. We have one telemetric imager. If it's important to have  
11 single in there, I'm fine with it.

12 JUDGE RUGGIERO: But your main contention is that the imaging  
13 that's taking place in the reference is different than what you're doing.

14 MR. BURNS: Yes. Yes.

15 JUDGE RUGGIERO: Any other questions? Do you have anything  
16 else?

17 MR. BURNS: May I make closing remarks then?

18 JUDGE RUGGIERO: Sure. Go ahead.

19 MR. BURNS: We understand there's various remedies. Our request,  
20 our plea, is that you reverse the examiner in whole.

21 As I alluded to earlier, if there is an approach that is stated in  
22 paragraph 50C of CFR 41, which I'm sure you're quite familiar with that, an  
23 explicit statement of how a claim on appeal may be amended to overcome a  
24 specific rejection, may be remanded back to the examiner.

25 So we have put together that language. If any of you are interested in  
26 looking at that, we'd be happy to leave a copy with one of you or more to

1 look at that.

2 To summarize, we feel we are the first inventor. We feel -- sorry --  
3 that I am the first inventor. We are developing this project. We feel that the  
4 102B is not appropriate. We feel the 103A is not appropriate. We appeal to  
5 you to help get this sorted out so that we can continue with this invention.

6 JUDGE RUGGIERO: Okay.

7 MR. BURNS: Any other questions? Your Honors, thank you very  
8 much.

9 JUDGE RUGGIERO: Thank you.

10 MR. BURNS: Is there any request or interest in receiving this by any  
11 of you?

12 JUDGE RUGGIERO: No.

13 (Whereupon, the proceedings at 9:26 a.m. were concluded.)